Patent Office
Canberra

I, KAY WARD, ACTING MANAGER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. PQ 3146 for a patent by CANON KABUSHIKI KAISHA filed on 29 September 1999.

WITNESS my hand this
Twenty-second day of September 2000

4

KAY WARD
ACTING MANAGER EXAMINATION
SUPPORT AND SALES

Appln. No.: 09/666,482
Filed: September 20, 2000
Inv.: William Young, et al.
Title: SMART CARD SYSTEMS AND
Electronic Ticketing Methods

S & F Ref: 478565

ORIGINAL

AUSTRALIA

Patents Act 1990

PROVISIONAL SPECIFICATION FOR THE INVENTION ENTITLED:

A Dual Purpose Smart Card

Name and Address of Applicant: Canon Kabushiki Kaisha, incorporated in Japan, of 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146, JAPAN

This invention is best described in the following statement:

A DUAL PURPOSE SMART CARD

Technical Field of the Invention

The present invention relates generally to smart cards and, in particular to smart cards which have a dual function as a business card.

Background of the Invention

Business cards are well known and almost all persons engaged in a business have a business card. Typically these are fabricated from cardboard and are very inexpensive being intended to be given away by the person in business (the donor) to a prospective or existing customer (the donee). Traditionally the business card includes the name of the business person, their title, their educational qualifications, the company name, the address of their office, the contact details such as fax, telephone and email, and like data relating to the donor. In recent times with the reduced cost of reproducing photographic images very often a photograph of the donor is also provided in order to better refresh the memory of the donee whenever the donee views the business card.

In recent times, smart cards have been gaining commercial acceptance and the percentage of the population which has access to a smart card reader is steadily increasing.

The object of the present invention is to take advantage of this increasing penetration of smart card readers and provide a dual purpose smart card which is both a business card useable by a donee without smart card access, and an enhanced business card useable by a donee with smart card access.

Summary of the Invention

In accordance with a first aspect of the present invention there is disclosed a dual purpose smart card for both non-computer based and computer-based information transfer, said card comprising:

a substrate;

an electronic memory means located on, or within, said substrate;

a first set of indicia located on said substrate, visible to a human reader and conveying a first set of data relating to the donor of said card;

a second set of indicia located on said substrate and comprising a plurality of icons activatable by the donee of said card; and

either (a) a second set of data stored in said electronic memory means relating to the donor of said card, or (b) pointing data stored in said electronic memory means and pointing to a remote location at which said second set of data is stored;

wherein said card is insertable in a card reader associated with a computer based output device, and following activation of at least one of said icons at least part of said second data is rendered on said output device.

Brief Description of the Drawings

Several preferred embodiments of the present invention will now be described with reference to the drawings in which:

Fig. 1 is a view of the front of a dual purpose smart card in accordance with a first embodiment of the present invention;

Fig. 2 is a view of the rear of the card of Fig. 1;

Fig. 3 is a schematic representation of computer equipment available to the donor and donee and connected by means of a communications link;

Fig. 4 is a front view of a dual purpose smart card of a second embodiment;

Fig. 5 is a front view of a dual purpose smart card of a third embodiment;

Fig. 6 is a rear view of the card of Fig. 5;

Fig. 7 is a front view of a dual purpose smart card of a third embodiment;

Fig. 8 is a rear view of the card of Fig. 7;

Fig. 9 is a view of the front face of a dual purpose smart card of a fourth embodiment;

Fig. 10 is a view of the reverse side of the card of Fig. 9; and

Fig. 11 is a schematic block diagram of the general purpose computer system 100 of the donor, to which the general purpose computer system 200 of the donee is entirely analogous.

Detailed Description of the Preferred Embodiments

As seen in Figs. 1 and 2, a dual purpose card 1 is of substantially similar size and appearance to a conventional business card and, as depicted in Fig. 1, on the face thereof is a picture 2 of the donor. Also located on the front face are an on/off icon 4, a play icon 5 and a send message icon 6.

As seen in Fig. 2, located on the reverse side of the card 1 are the address and contact details of the donor and electrical contacts 8 which enable an integrated circuit (not illustrated) located within the card 1 to make electrical contact after the card 1 has been inserted into a card reader 10.

The computing equipment utilised with the dual purpose video card is illustrated in Fig. 3, the equipment utilised by the donor being illustrated on the left in Fig. 3 and the equipment utilised by the donee being illustrated on the right.

At the donor's premises are located a card reader 10, a computer 11 including a display 12 and a keyboard 13. A digital video camera 14 is also provided and connected to the computer 11. The computer 11 is also connected to a communications link 16 which is also connected to the computer 21 at the donee's premises. Also located at the donee's premises and connected to the computer 21 are a display 22, a keyboard 23 and a card reader 20.

In order to create stored information within the card 1, the donor records a video message via the video camera 14 which is then stored within the computer 11. Since the amount of storage within the card 1 is relatively small (typically 512 bytes) the card reader 10 is used to write the storage location of the video message within the computer 11 into the card 1 following its insertion into the card reader 10.

Then the card 1 is able to be given to the donee. If the donee does not have computer equipment available to him, then the donee uses the card as a regular business card and simply uses the name and address and conventional contact details printed on the rear surface of the card 1 as a means by which the donee can contact the donor.

However, if the donee has the equipment illustrated in Fig. 3 available to him, the donee can insert the card 1 into the card reader 20 and press the on icon 4 and the play icon 5. As a consequence, the address of the video message recorded in the computer 11 will be transferred to the computer 21 which will then connect via the communications link 16 to the computer 11. The computer 11 then transfers the video message to a video email program stored in the computer 21. As a consequence the video email message is displayed on the display 22 and is available to the donee to view whenever he wishes.

It will be appreciated by those skilled in the computing arts that if a video camera 14 is not available to the donor then the message is able to be purely audio. In the alternative the message can also be typed via the keyboard 13 into the computer 11 and therefore constitute only a text or email message.

It will be appreciated that whether the donor's business is selling services or selling products, or both, the message conveyed by the donee can be advertising, promotional information, and the like. The content of the message is limited only by the imagination of the donor and/or his advertising agency.

Turning now to Fig. 4, a second embodiment of a card 31 is illustrated. Here the business of the donor is operating a frequent flyer's point scheme for an airline (QANTAS). The front face of the card 31 is provided with the usual address information 32, and on/off icon 34, a points enquiry icon 35 and an expiry enquiry icon 36.

Prior to the card 31 being given to the frequent flyer member, the onboard memory of the card 31 has stored in it the membership number of the holder. At the member's home or business premises the card 31 can be inserted into the card reader 20 and the on/off icon 34 pressed to activate the computer 21. As a consequence the membership

number and contact details of the airline computer 11 are passed to the computer 21 which calls the airline computer 11 via the communications link 16.

When the airline computer 11 receives this information it completes the communications link between the two computers and in response to pressing of the points enquiry icon 35 is able to download to the computer 21 the number of points currently available for the frequent flyer. Similarly, if the expiry enquiry icon 36 is pressed then the information about the expiry dates of the currently available points is also downloaded to the computer 21. This information is displayed on the display 22 following its receipt by the computer 21.

Turning now to Figs. 5 and 6, a business card 41 of a further embodiment is illustrated, the front face being illustrated in Fig. 5 and the rear face being illustrated in Fig. 6. In this instance the business conducted by the donor is that of providing cooking classes and on the rear face as seen in Fig. 6 is a recipe for a particular type of biscuit. This is the information which is used by a donee who does not have a computer system available. However, where the donee does have such a computer system available, insertion of the card 41 into the reader 20 enables information about the ingredients, preparation, mixing, serving, etc to be displayed on the display 22 as a result of pressing icons 44. This is an application in which the information about ingredients, preparation, etc is able to be of a sufficiently compact nature to be stored entirely within the electronic memory device carried by the card 41.

A still further embodiment is illustrated in Figs. 7 and 8 which relates to real estate. The real estate card 51 is illustrated with its front face containing the usual address and contact information 52. As illustrated in Fig. 8, the rear face of the card 51 contains icons 54 which enable real estate information to be downloaded and browsed.

At present for both sale and lease real estate activity, many real estate agents provide information on the internet as to the listings, even to the point of allowing an enquirer to view different rooms within a given property. However, in the real estate business the identification of a first introduction of a particular prospective purchaser or

lessee to a particular premises is all important since it secures the right to commission by the real estate agent. A drawback of the internet enquiry is that it is essentially anonymous and it is difficult for the real estate business to identify those persons who have enquired at the website of the real estate business. However, in accordance with the arrangement illustrated in Figs. 7 and 8, stored within the electronic memory of the card 51 is a unique identifying number, or customer number, which indicates to the donor the identity of the donee. As a consequence, when the donee enquires via his computer of the information stored in the donor's computer, the date and time of the enquiry and the identity of the prospective customer making the enquiry are able to be recorded in the computer 11. Therefore should the donee approach several real estate agents in relation to the one property, a method of verifying the time of approach is available and enables disputes about commission to be resolved.

Turning now to Figs. 9 and 10, a still further dual purpose business card 61 is illustrated. On the front face of the card illustrated in Fig. 9, in addition to the usual information identifying the business of the donor, are set out a plurality of images 62 which depict scenic locations in the locality of the business. The rear surface of the card 61 is left substantially blank as illustrated in Fig. 10 and therefore the card 61 is able to be used as a conventional postcard. The card may be given away as a promotion or may be purchased by the user. If the user sends the card, for example, to his mother who does not have the computer equipment illustrated in Fig. 3 available to her, then the user is able to record a handwritten message and the card functions substantially in the same way as a conventional postcard. However, should the user send the card to his sister who has the computer equipment illustrated in Fig. 3 available, then in addition to the written information on the rear surface of the card, the sister is also able to display on her computer 21 via the communications link 16, full size images on the display 22 corresponding to the various images 62. These images can be browsed, printed, etc.

Details of the conventional general purpose computer system 100 able to be used by donor or donee are shown in Fig. 11. The processes required to write data to, or read data

from, the card are able to be implemented as software, such as an application program executing within the computer system 100. In particular, the steps of the method are effected by instructions in the software that are carried out by the computer. The software may be divided into two separate parts; one part for carrying out the methods; and another part to manage the user interface between the latter and the user. The software may be stored in a computer readable medium, including the storage devices described below, for example. The software is loaded into the computer form the computer readable medium, and then executed by the computer. A computer readable medium having such software or computer program recorded on it is a computer program product. The use of the computer program product in the compute preferably effects an advantageous apparatus for carrying out the embodiments of the invention.

The computer system 100 comprises a computer module 11, input devices such as a card reader 10, a keyboard 13, mouse 103, and camera 14, output devices including a printer 115 and a display device 12. A Modulator-Demodulator (Modem) transceiver device 116 is used by the computer module 11 for communicating to and from a communications network 120, for example connectable via a telephone line 121 or other functional medium. The modem 116 can be used to obtain access to the Internet, and other network systems, such as a Local Area Network (LAN) or a Wide Area Network (WAN).

The computer module 11 typically includes at least one processor unit 105, a memory unit 106, for example formed from semiconductor random access memory (RAM) and read only memory (ROM), input/output (I/O) interfaces including a video interface 107, and an I/O interface 113 for the keyboard 13, mouse 103, and card reader 10, and an interface 108 for the printer 115, modem 116 and camera 14. A storage device 109 is provided and typically includes a hard disk drive 110 and a floppy disk drive 111. A magnetic tape drive (not illustrated) is also able to be used. A CD-ROM drive 112 is typically provided as a non-volatile source of data. The components 13, 103 to 115 typically communicate via an interconnected bus 104 and in a manner which results in a

conventional mode of operation of the computer system 100 known to those in the relevant art. Examples of computers on which the embodiments can be practised include IBM-PCs and compatibles, Sun Sparcstations or alike computer system evolved therefrom.

Typically, the application program of the preferred embodiment is resident on the hard disk drive 110 and read and controlled in its execution by the processor 105. Intermediate storage of the program and any data fetched from the network 120 may be accomplished using the semiconductor memory 106, possibly in concert with the hard disk drive 110. In some instances, the application program will be supplied to the user encoded on a CD-ROM or floppy disk and read via the corresponding drive 112 or 111, or alternatively may be read by the user from the network 120 via the modem device 116. Still further, the software can also be loaded into the computer system 100 from other computer readable media including magnetic tape, a ROM or integrated circuit, a magneto-optical disk, a radio or infra-red transmission channel between the computer module 11 and another device, a computer readable card such as a smart card, a PCMCIA card, and the Internet and Intranets including email transmissions and information recorded on websites and the like. The foregoing is merely exemplary of relevant computer readable media. Other computer readable media are able to be practised without departing from the scope and spirit of the invention.

Industrial Applicability

It apparent from the above that the embodiments of the present invention are applicable to a wide range of industries including industries involved in the sale of products as well as service industries involved in the provision of services.

The foregoing describes only some embodiments of the present invention and modifications, obvious to those skilled in the art, can be made thereto without departing from the scope of the present invention.

In the context of this specification, the word "comprising" means "including principally but not necessarily solely" or "having" or "including" and not "consisting only of". Variations of the word comprising, such as "comprise" and "comprises" have corresponding meanings.

5

Claims:

1. A dual purpose smart card for both non-computer based and computer-based information transfer, said card comprising:

a substrate;

an electronic memory means located on, or within, said substrate;

a first set of indicia located on said substrate, visible to a human reader and conveying a first set of data relating to the donor of said card;

a second set of indicia located on said substrate and comprising a plurality of icons activatable by the donee of said card; and

either (a) a second set of data stored in said electronic memory means relating to the donor of said card, or (b) pointing data stored in said electronic memory means and pointing to a remote location at which said second set of data is stored;

wherein said card is insertable in a card reader associated with a computer based output device, and following activation of at least one of said icons at least part of said second data is rendered on said output device.

2. The card as claimed in claim 1 wherein said second set of data comprises an email text message.

3. The card as claimed in claim 1 or 2 wherein said second set of data comprises an audio voice mail message.

4. The card as claimed in any one of claims 1-3 wherein said second set of data comprises a video email message.

5. The card as claimed in any one of claims 1-4 wherein said first set of data comprises the name and contact information of the donor.

6. The card as claimed in any one of claims 1-5 wherein said second set of data relates to the products sold by, and/or services provided by, said donor.

7. The card as claimed in claim 6 wherein said products and/or services comprise real estate products and/or services.

8. The card as claimed in any one of claims 1-5 wherein said second set of data relates to information status of the donee's role in the donor's business.

9. The card as claimed in claim 8 wherein the donor's business comprises the allocation of business bonus points and said information status comprises the number of points allocated to the donee by the donor.

10. The card as claimed in claim 9 wherein the bonus points comprise frequent flyer points.

11. The card as claimed in claim 8 wherein the donor's business comprises the allocation of credit and said information status comprises the current outstanding balance of the donee's account.

12. The card as claimed in claim 1 wherein the donor's business comprises the provision of culinary services and said first set of data includes a recipe for a dish and said second set of data comprises detailed instructions relating to the preparation of said dish.

13. The card as claimed in any one of claims 1-12 wherein said output device comprises a screen display.

Dated 28 September, 1999

CANON KABUSHIKI KAISHA

Patent Attorneys for the Applicant/Nominated Person

SPRUSON & FERGUSON

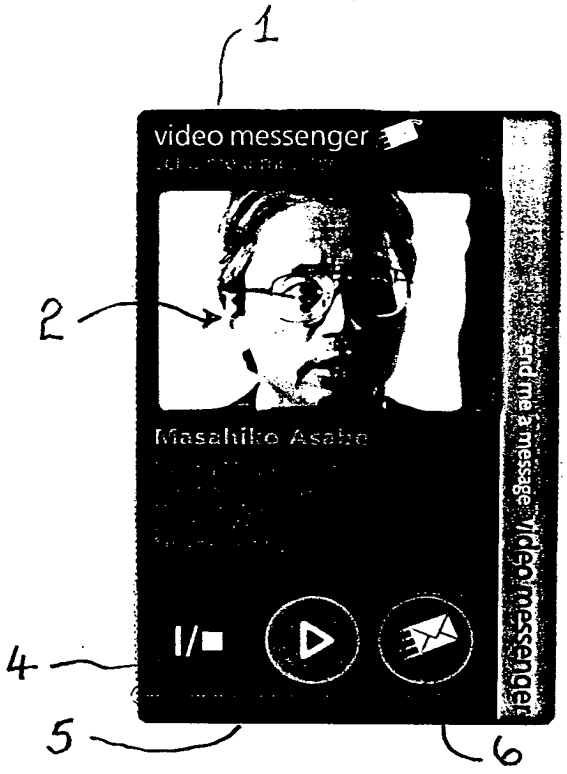


FIG. 1

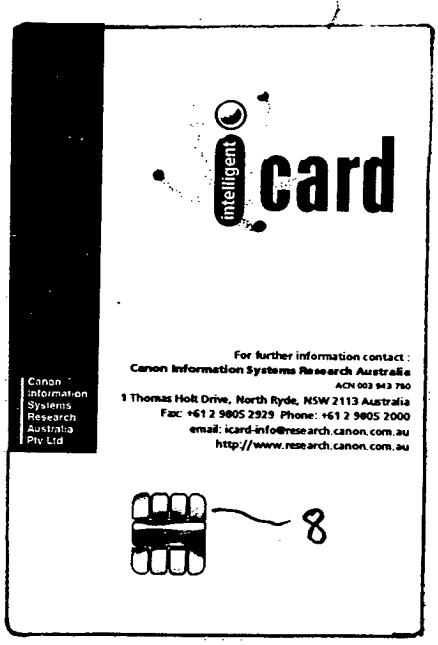


FIG. 2

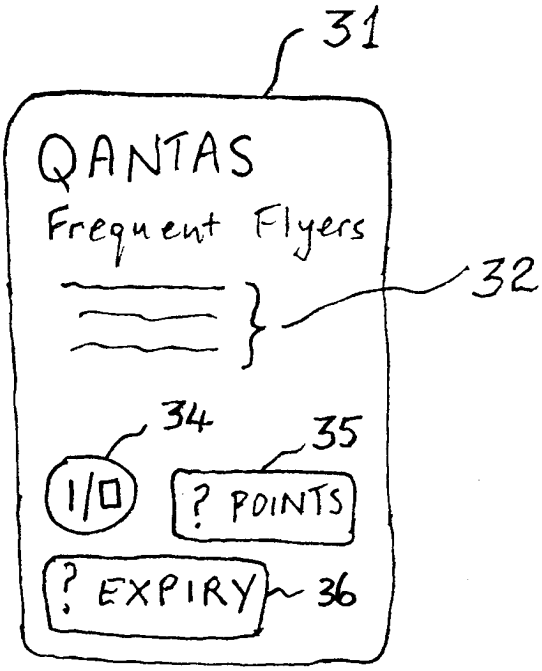


FIG. 4

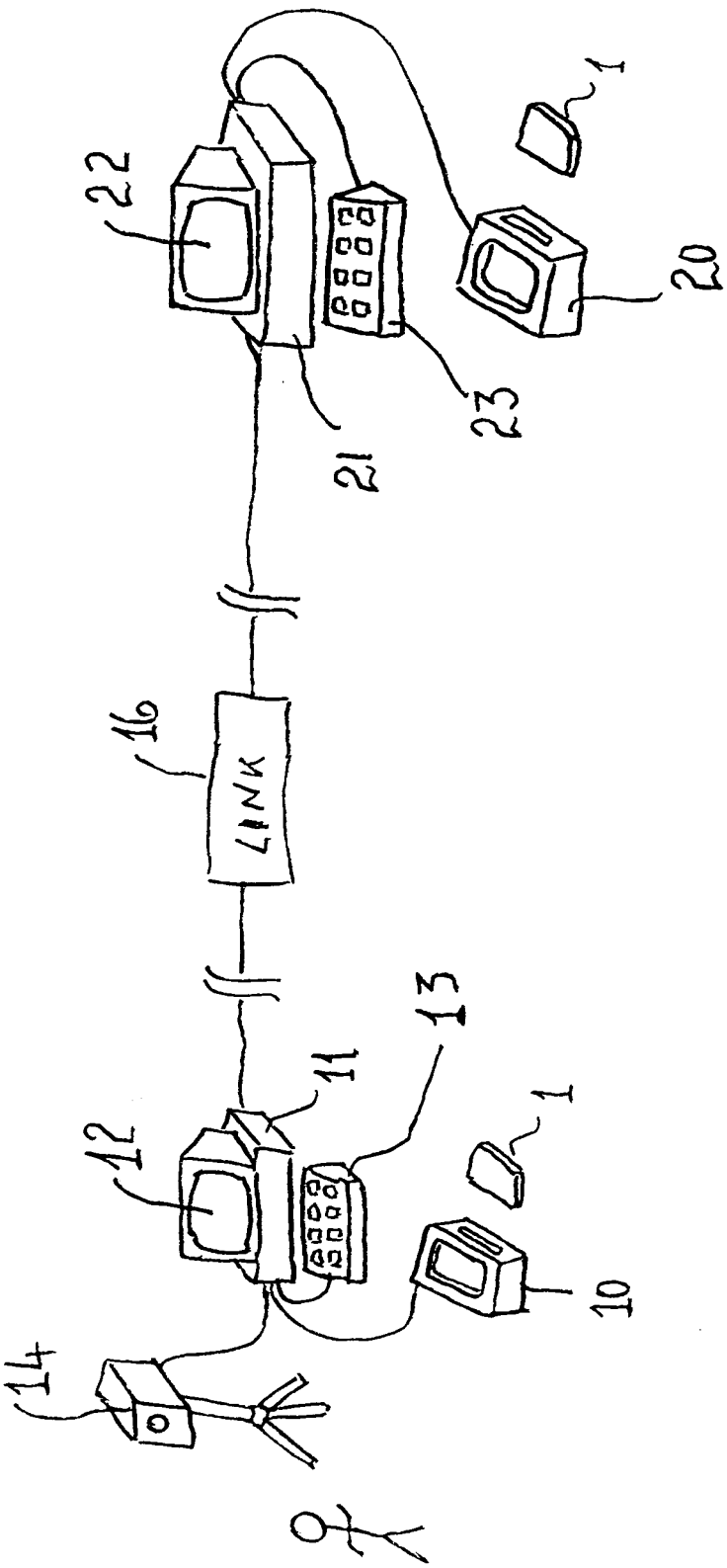


FIG. 3

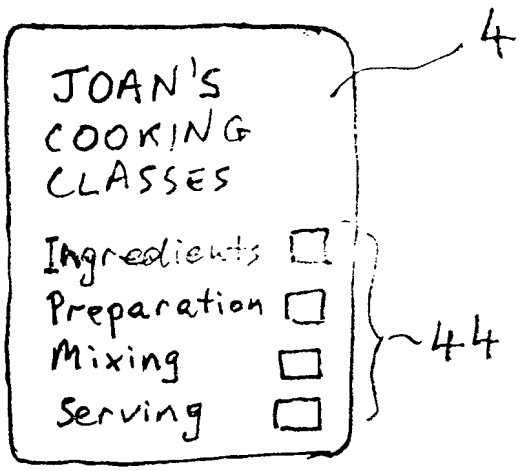


FIG. 5

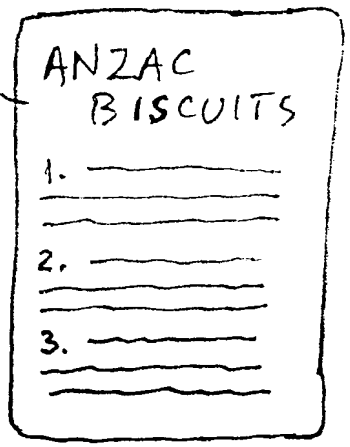


FIG. 6

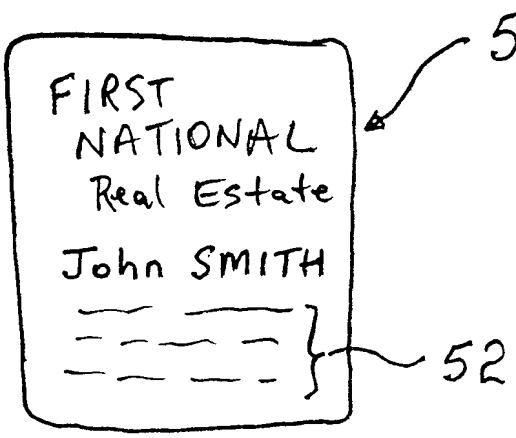


FIG. 7

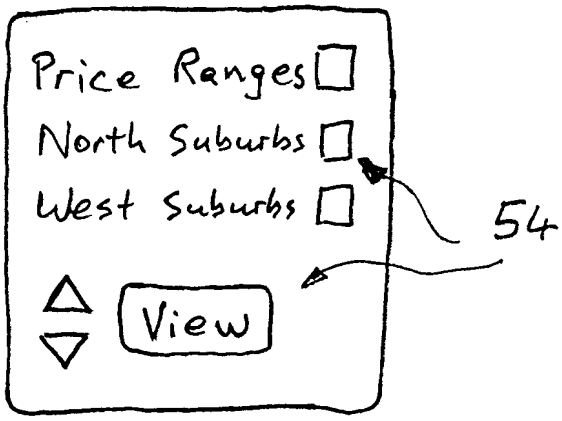


FIG. 8

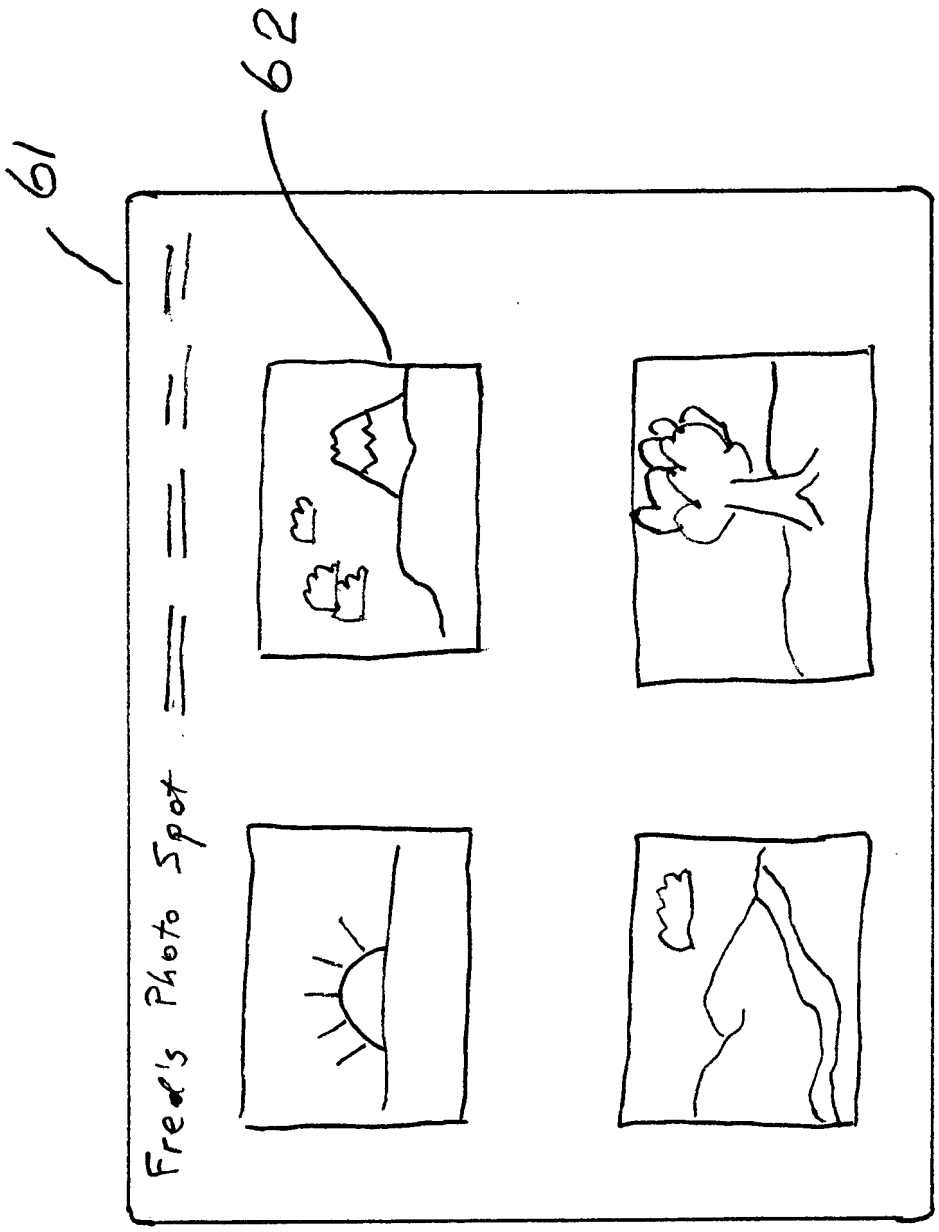
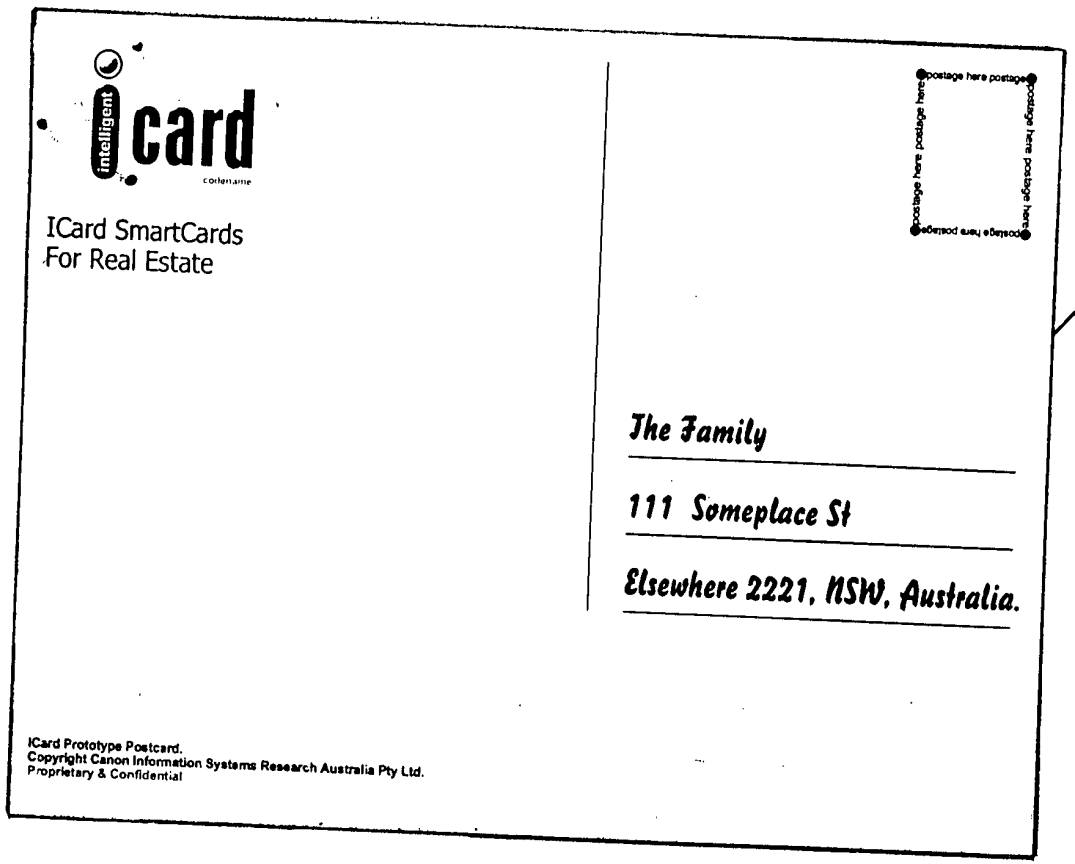


FIG. 9


intelligent
icard
ICard SmartCards
For Real Estate
postage here postage here postage here postage here
The Family
111 Someplace St
Elsewhere 2221, NSW, Australia.
ICard Prototype Postcard.
Copyright Canon Information Systems Research Australia Pty Ltd.
Proprietary & Confidential

61

FIG. 10

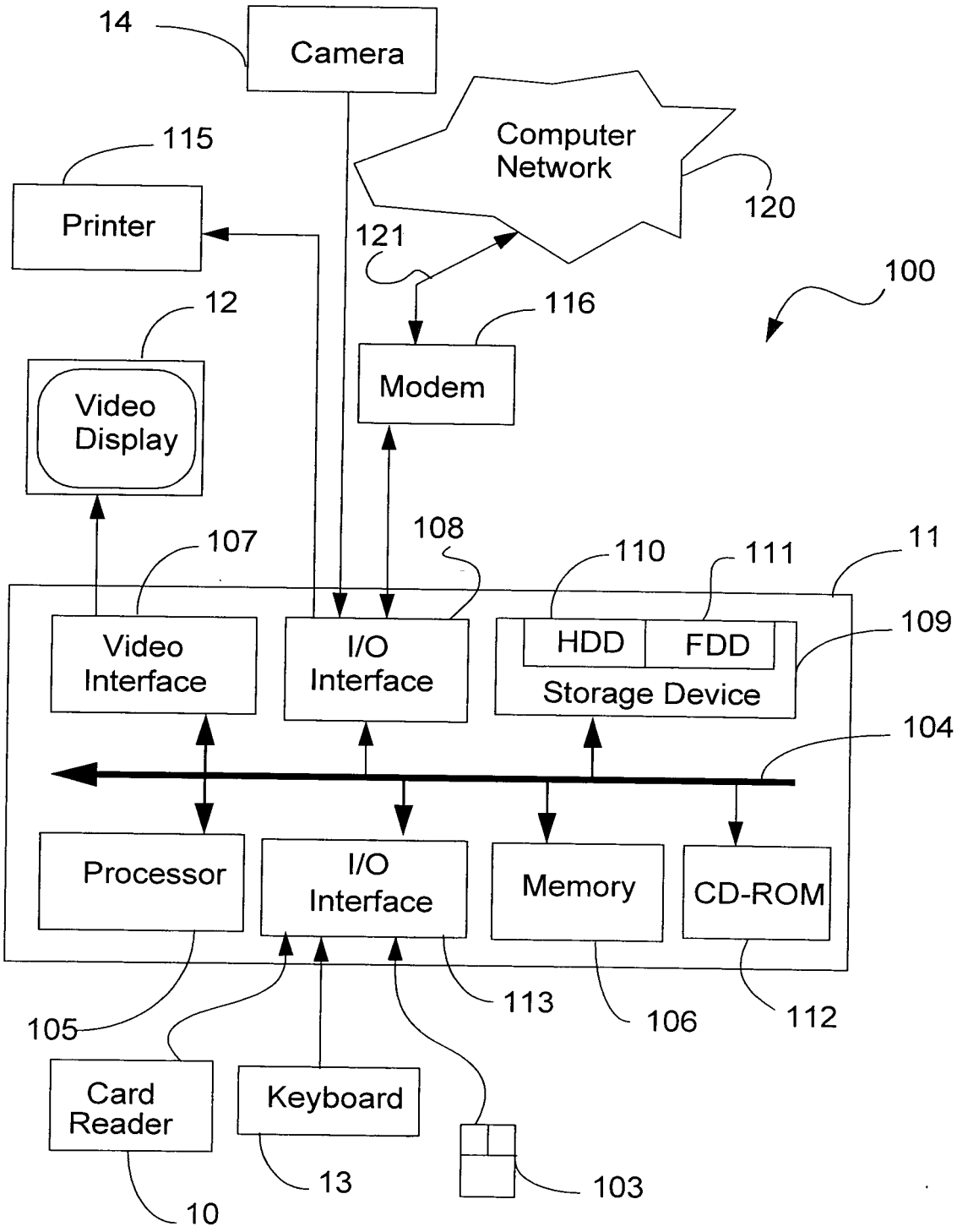

14
Camera
115
Printer
Computer Network
120
121
100
12
116
Video Display
Modem
107
108
110
111
11
Video Interface
I/O Interface
HDD
FDD
Storage Device
109
104
Processor
I/O Interface
Memory
CD-ROM
105
113
106
112
Card Reader
Keyboard
13
103
10

FIG. 11

169.1833 PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	:	Examiner: Unassigned
WILLIAM YOUNG, ET AL.	)	
	:	Group Art Unit: 2876
Application No.: 09/666,482	)	
	:	
Filed: September 20, 2000	)	
	:	
For: SMART CARD SYSTEMS AND ELECTRONIC TICKETING METHODS	)	November 27, 2000
	:	
	)	

The Commissioner for Patents
Washington, D.C. 20231

CLAIM TO PRIORITY

Applicants hereby claim priority under the International Convention and all rights to which they are (he is) entitled under 35 U.S.C. § 119 based upon the following Australian Priority Applications:

PQ3144	Australia	September 29, 1999
PQ3146	Australia	September 29, 1999; and
PQU363	Australia	May 8, 2000.

A certified copy of the priority documents is enclosed.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

Shawn W. Fraser

Attorney for Applicants
Shawn W. Fraser
Registration No. 45,886

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

SWF:eyw